Merrychef

GB

32Z3765GB

402s V4 Service Handbook
Issue 1

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Users are cautioned that maintenance and repairs should be performed by a Merrychef authorized service agent using genuine Merrychef replacement parts. Merrychef will have no obligation with respect to any product that has been improperly installed, adjusted, operated or not maintained in accordance with national and local codes or installation instructions provided with the product, or any product that has its serial number defaced, obliterated or removed, or which has been modified or repaired using unauthorized parts or by unauthorized service agents. For a list of authorized service agents, please refer to the inside back page of this booklet. The information contained herein (including design and parts specifications) may be superseded and is subject to change without notice.

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This equipment complies with the following EEC directives:
EMC 89/336 EEC
LVD 73/23 EEC

Merrychef reserves the right to alter specifications without prior notice.

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IMPORTANT SAFETY INSTRUCTIONS
PLEASE READ THE FOLLOWING SAFETY INSTRUCTIONS CAREFULLY

This manual is designed to assist engineers who have been on a recognised product familiarisation and training course run by Merrychef. It has been prepared to offer technical guidance for the 402s range of Ovens.
Please remember that it is wiser not to attempt a service task if you are unsure of being able to complete it competently, quickly, and above all safely.
To avoid injury to yourself, and to protect the appliance from possible damage, please follow this Safety Code when servicing these ovens.
Before attempting to repair the oven, check it for microwave emission using a calibrated emission detector.
Check that the oven is not emitting microwaves, even when supposedly not in operation.
Check that the oven is not operating continuously, whether the display indicates cooking or not.
Always discharge the HT capacitors before working on the oven using a suitably insulated 10 MW Resistor.
When testing the oven with covers off run for short periods of time only or magnetrons will overheat and the display will show Error condition.
Before removing any covers from the oven, do all of the following.
Switch off the mains supply and remove the plug from the wall socket.
or
If the oven is hard wired, ensure that the power is turned off at the isolator switch.
Note:
The On/Off switch on the oven is not adequate protection against electric shock, as it does not isolate all of the internal wiring from the mains.

Upon completion of a service the oven, or before reconnecting the appliance to the electrical supply for testing, check all of the following points:

- All internal electrical connections are correct (see wiring diagram).
- All wiring insulation is correct and is not touching a sharp edge.
- All grounding connections are electrically and mechanically secure.
- All door safety interlocks are secure and mechanically sound.
- The door operation is smooth, and the arms run freely in the slots.
- The door activates all four of the door interlock switches and in the correct order
- The temperature sensor is correctly connected to the Power PCB.

Before finishing a service call, recheck the following points:

- All of the electronics are functioning correctly and all of the touch pads are working.
- Microwave emissions are below permissible limit of 5 mW/cm².
- The power output of the oven is checked in accordance with the procedure page.
- Oven has correct 50mm (2 inches) air gap all round and 50mm (2 inches) above.
  Air flow should not be restricted.

Standard Features

Accelerated Cooking Technology®
combines three heat technologies:

- Convection
- Microwave
- Impingement

- Ventless operation
- Up to15x faster than a conventional oven
- Stainless Steel construction
- Easy to use Digital Control Panel
- MenuKey ® technology allows users to upload & download cooking menu items in up to 256 Programs
- In-built diagnostics
- Easy to clean interior
- Cool to touch door

Options & Accessories

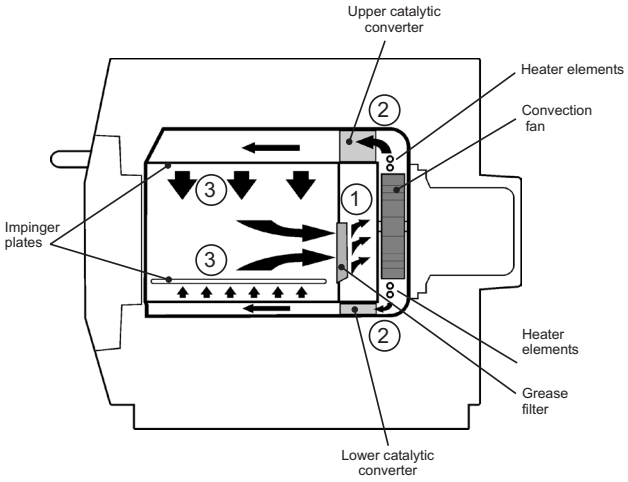
- Griddle Pan
- Rack
- Cool Down Pan
- Vitreous Enamel Oven Tray
- Handle
- Grill Pan Set
  (includes 4 Pans, 2 Handles & 2 Carriers)
- Bread Basket
- Pizza Paddle
- Oven Cleaner
- Oven Protector

Remote monitoring available

Specifications

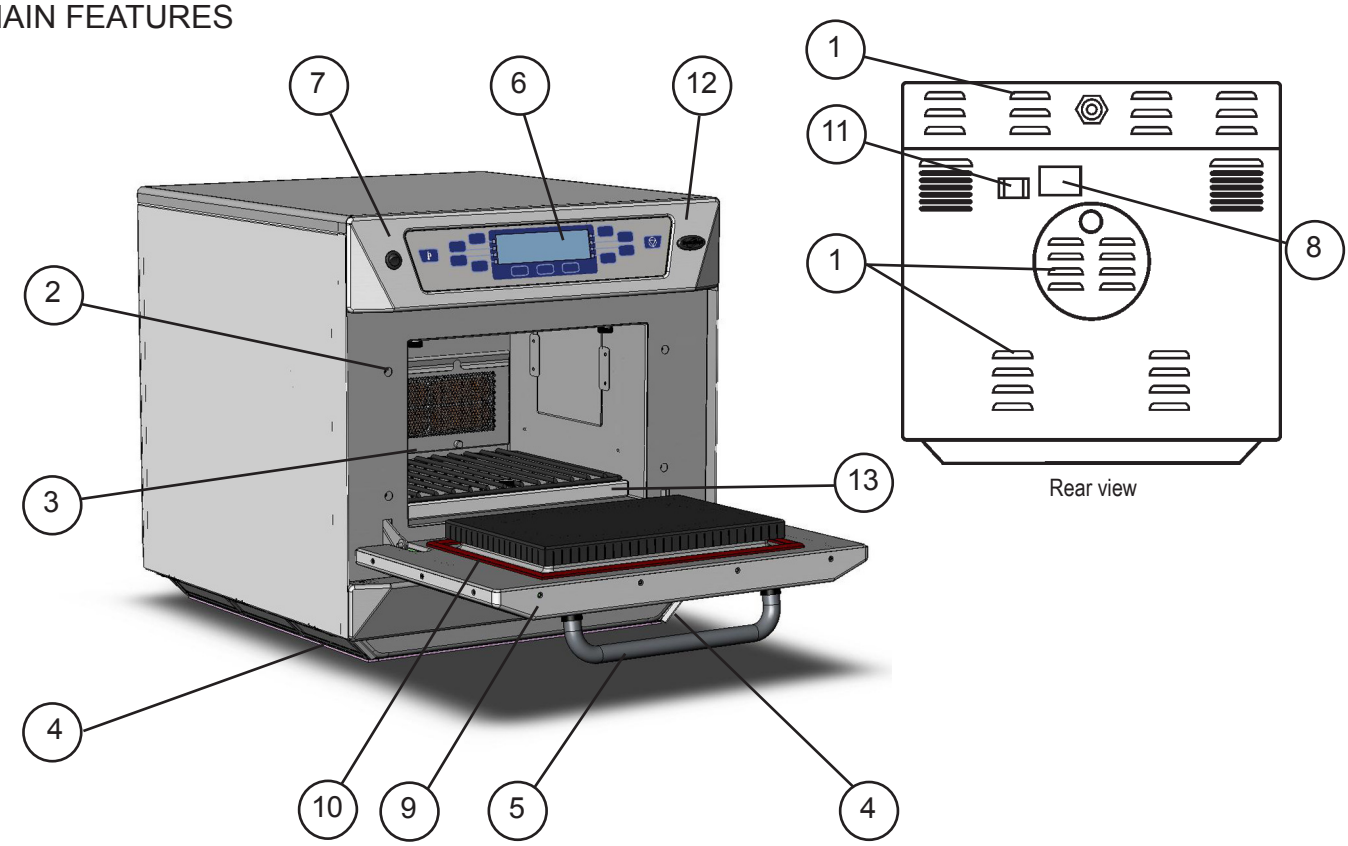
Introducing the latest innovation in ventless accelerated cooking from Merrychef.

How it works:
The convection fan pulls air in through the grease filter [1] which removes the majority of particulates from the air flow. The air is then heated and returned to the cavity through the catalysts [2] and impinger plates [3] to produce an even heat pattern in the oven. This heat layout minimises the areas where grease can build up, allowing food to cook evenly to produce a crisp golden finish.



- The unit includes in-built catalytic converters eliminating the need for a ventilation hood.
- A standard metal baking tray can be used.
- Oven controls allow multi-stage programming. Each programme offers up to six stages each with its own time, fan speed and microwave power settings.
- The Merrychef MenuKey allows the user to upload and download new programmes. A change of menu could be implemented simultaneously in remote sites using this feature.

MAIN FEATURES



1 AIR OUTLETS
These vents on the rear panels enable air which has been used to cool internal components to escape. It will not allow microwave energy to escape into the environment. They must be kept free from obstruction.

2 OVEN CAVITY
The cavity is constructed from stainless steel and vitreous enamelled panels. It must be kept clean (see CLEANING).

3 CONVECTION FAN, GREASE FILTER & CATALYTIC CONVERTOR
The convection fan, which is located behind the catalytic convertor pulls air in through the filter which removes the majority of the smoke from the air flow. The air is then heated and returned to the cavity through the impinger plates to produce an even heat pattern in the oven. This layout minimises areas where grease build up can occur. Great care should be taken when cleaning this area of the oven - please note the cleaning requirements on see CLEANING.
The metal grease filter grill covering the fan must be kept clean and free of debris (See CLEANING)

4 AIR INLET FILTERS (LEFT & RIGHT)
Situated at the left and right hand side of the base at the front. These are part of the ventilation system and must be kept free of obstruction and cleaned on a daily basis.

5 DOOR HANDLE
This is a rigid bar which is pulled downwards and towards you to open.

6 CONTROL PANEL

7 ON/OFF SWITCH
When switched ON, the control panel will illuminate. The fan and ventilation system will also operate.

8 RATING PLATE
Found on the rear panel, this states the serial number, model type & electrical specifications.

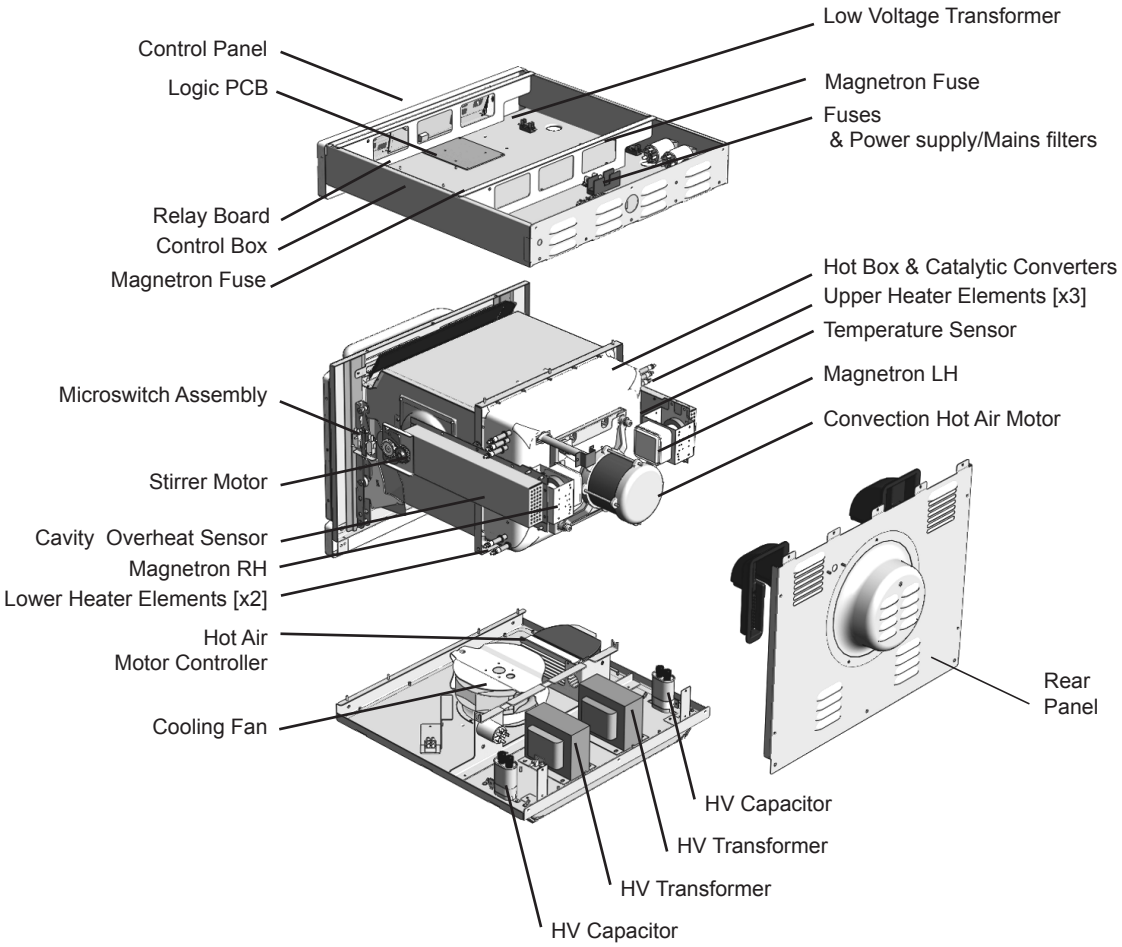
9 DOOR
This is a precision-made energy barrier with three microwave safety interlocks. It must be kept clean (see CLEANING section). The door should NOT be used to support heavy dishes.

10 DOOR SEALS
These ensure a tight seal around the door. They should be kept clean and checked regularly for signs of damage. At the first sign of wear they should be replaced by a Merrychef approved Service Agent.

11 STEAM VENT (on rear of oven)
This enables steam to escape and prevents build up of condensation. It will not allow microwave energy to escape.

12 MenuKey 2
Changes the programs on the oven (See MenuKey section for downloading programs on a MenuKey).

13 RACK
Should be removed daily for cleaning
(see CLEANING section).



Oven software

The 402s Oven uses 2 types of software CodeKey and MenuKey, supplied on similar solid state ‘keys’. CodeKey installs the oven firmware version, referred to as Software on the control panel OVEN INFORMATION screen at start up. The MenuKey is loaded with pre-set oven Cooking programs organised in Category groups. Using a MenuKey a complete set of cooking programs can be loaded into the Oven’s memory in one simple operation.

CodeKey:

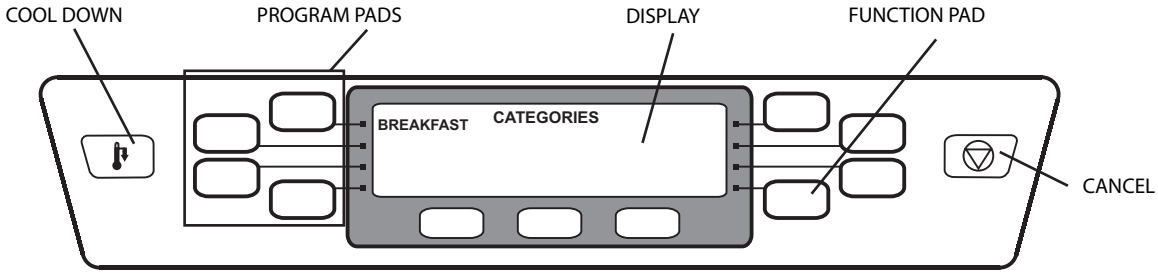
CodeKey installs the oven firmware version which enables and disables various features.

KFC and all QSR ovens have Firmware version 4.0 which disables Manual operation and set up functions.

To perform engineering functions download Firmware/ Software version 4.3 to enable Manual controls.

Quick Start Guide

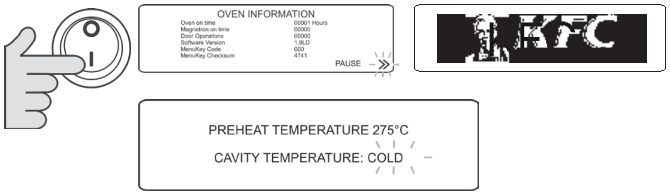
CONTROL PANEL



USING A COOKING PROGRAM e.g. BREAKFAST/BACON

1 Switch the oven **ON**

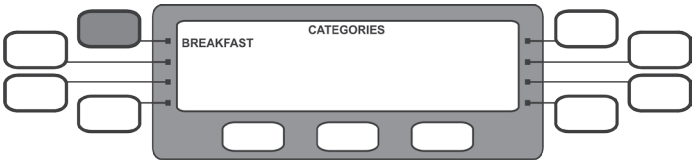
The oven heats up to its PREHEAT temperature this will take approximately 20 minutes.
The oven is ready to use when the CATEGORIES screen is in the display.



2 **Select the Category e.g BREAKFAST**

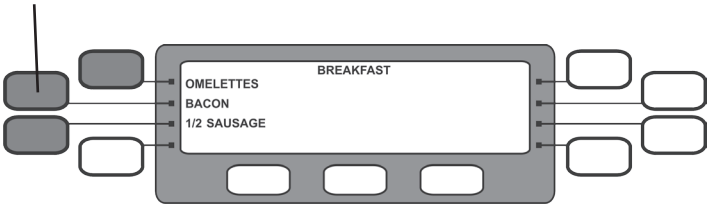
Taking all the necessary precautions to ensure you do not burn yourself, place the food onto the rack in the hot oven and close the door.

Hot surface Hazard



3 **TO BEGIN COOKING**

Select the program name
e.g. BACON



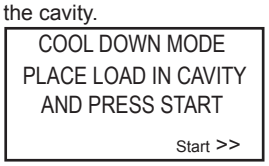
Standby

If the oven is not used for 3 minutes the oven goes into standby mode. Press CANCEL to return to the Categories screen.

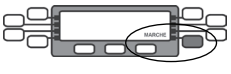
CLEANING: COOL DOWN : (approx. 30 minutes)

With the oven hot press the **Cool Down** pad to switch off the heaters.

Taking all necessary precautions place a suitable heaped container of ice, into the cavity.



Close the door and Press the function key **START** to begin the Cool Down cycle.



30 minutes

Switch the oven **OFF**.
The oven is now ready for cleaning refer to the CLEANING procedure.

Note: Ovens on a filter base have one large filter only

Hot surface Hazard

CLEANING:

- **ALWAYS switch off at the electrical supply and allow oven to cool before cleaning**
- Complete COOL DOWN procedure and allow the oven and accessories to cool before commencing cleaning

WARNING: DO NOT use caustic cleaners on any part of the oven or oven cavity as it will cause permanent damage to the Catalytic Convertors

Equipment: Merrychef oven cleaner, heat proof gloves, protective rubber gloves, non–abrasive nylon scrub pad, cleaning towel and cloths, eye protection and dust mask (optional)

COLD OVEN: CLEANING INSTRUCTIONS (After cool down)

CAUTION: Wear protective rubber gloves when cleaning the oven

Oven Parts and filters & Oven Cavity

Wash all parts in warm soapy water. Wash off using a clean cloth and plenty of clean, warm water. Dry using a fresh, clean cloth.

Remove the air filter at the base of the oven

Remove the rack and lift out bottom impinger plate

Remove top impinger plate

Undo fasteners

To remove grease filter pull handle and lift out

If the door seals are damaged, the oven must be repaired by an approved Servicer.

DO NOT spray directly into the fan opening at the rear of the oven

1.
Wear protective rubber gloves and protective glasses carefully spray Merrychef Oven Cleaner onto the internal surfaces of the oven except door seals.
DO NOT spray directly into the fan opening at the rear of the oven

2.
For difficult areas leave to soak for 10 minutes. Leave the oven door open during cleaning. Use a non–abrasive nylon scrub pad/sponge to clean all internal surfaces and the inside of the door.

3.
Wash off using a clean cloth and plenty of clean warm water to rinse top, sides and back of oven. Dry using a fresh clean cloth or paper towel. Wipe the outside of the oven with a damp cloth.

4.
Replace clean oven parts

Grease Filter
Top plate*
Bottom plate
Air filters x2

DO NOT USE TOOLS

DO NOT use the oven without a clean air filter and cavity grease filter in place

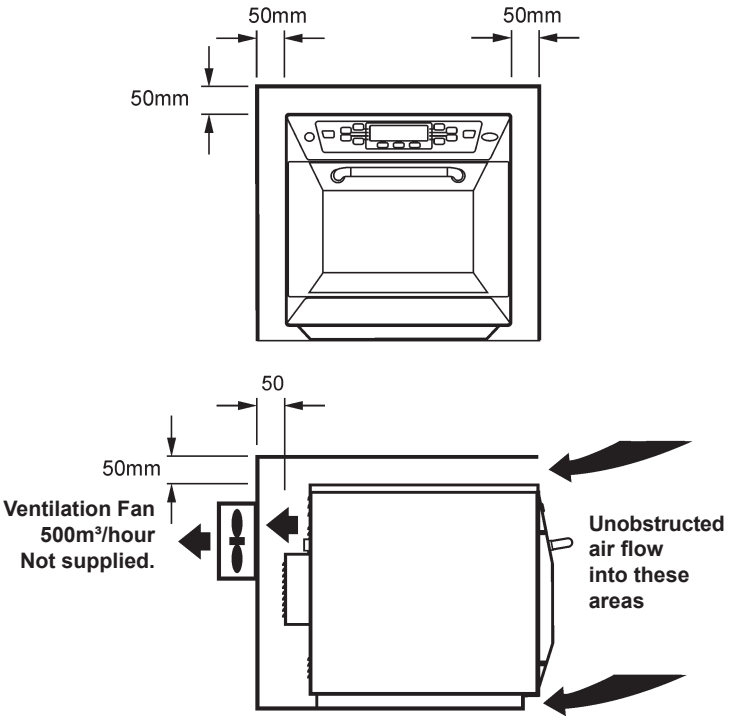
*When replacing impinger plates and the cavity grease filter use firm finger pressure to tighten fasteners. DO NOT USE TOOLS

BUILT IN INSTALLATION GUIDE

The Merrychef 402s is primarily designed for counter top installation and is not recommended for built-in enclosures. Should it be necessary to enclose the oven then please observe the following clearance and ventilation requirements. The clearances specified in the diagram are minimum, increased clearances will aid reliability and improve the life of the product.

Please give consideration to access for service in the future, including access to electrical supply service plug/ isolation switch. The operator will be charged an additional fee to cover the cost of gaining safe access to the oven.

Note:
That the additional fan within the enclosure should be rated at 500m³/hour.

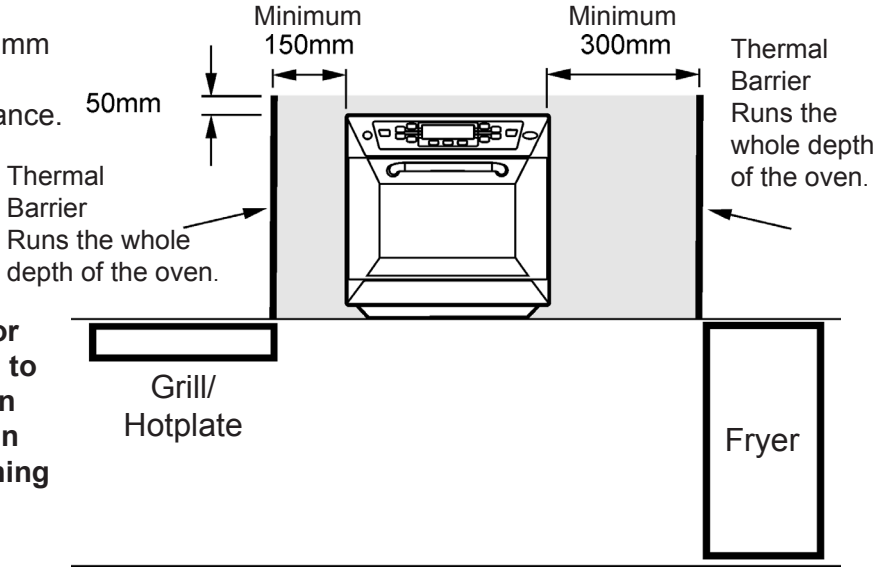


Note that the additional fan within the enclosure should be rated at 500m³/hour

COUNTER TOP CLEARANCE OF MAJOR HEAT SOURCES

The Merrychef 402s draws in a significant airflow for cooling purposes. It is essential that the oven is not located near or is isolated away from any major heat sources using distances and thermal barriers as shown in the diagram.

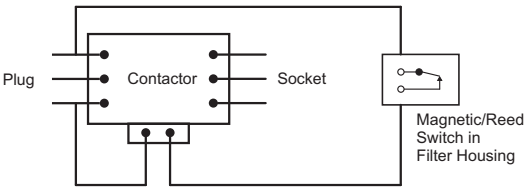
For grills and hotplates allow at least 150mm clearance either side of the oven.
For a fat fryer allow 300mm inches clearance.



Please give consideration to access for service in the future, including access to electrical supply service plug/ isolation switch. The operator will be charged an additional fee to cover the cost of gaining safe access to the oven.

Filter Base:

If the filter is not correctly installed the Magnetic reed switch will trip the contactor and the main power supply to the oven will be disconnected.



WARNING

This appliance must be earthed. Failure to do so may result in electric shock and death.

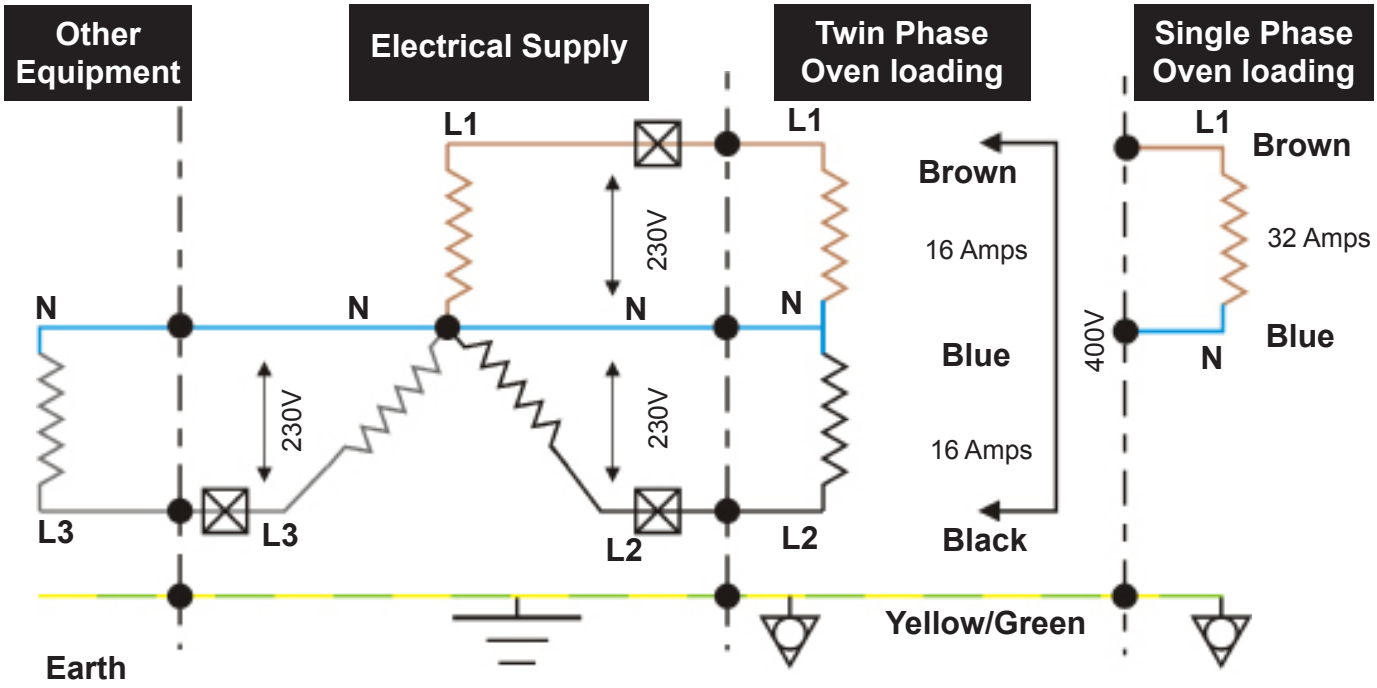
The Oven must be connected to a separate electrical supply and installed by a qualified and approved electrician. A suitably rated isolating switch with a 3mm contact gap on all poles should be fitted for each oven installed.

EQUIPOTENTIAL

An Equipotential Earth point is provided on the rear panel of the oven for independent Earth (GND) connection

WARNING: HIGH LEAKAGE CURRENT Earth connection is essential

Phase Loading Diagram



Phase Loading

Oven loading per phase is not equal therefore we recommend that other electrical equipment is connected to L3+ N.

☒ Circuit Breakers

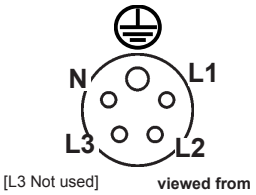
TWIN PHASE
Circuit Breakers should be rated at **20A per Phase** and be Time Delay, Motor Start Type (European Type C).

SINGLE PHASE
Circuit Breakers should be rated at **40A per Phase** and be Time Delay, Motor Start Type (European Type C).

Earth Leakage Circuit:
If the oven is connected to an Earth Leakage Circuit Breaker device, this should allow a minimum of 30 milliamps earth current without interrupting the circuit

If you are in any doubt about your electrical supply, seek the advice of a qualified electrician

RED



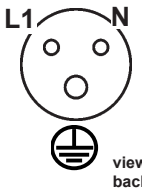
[L3 Not used]

viewed from back of plug

Plug Type:
Three Phase
32Amp
IEC 60309
[EN60309]
L1+ L2+ N+ E
[L3 is not used]

20Amp

BLUE



viewed from back of plug

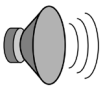
Plug Type:
Single Phase
32Amp
IEC 60309
[EN60309]
L1+N+E

40Amp

OVEN NOT FUNCTIONING:

1. Is the oven plugged in and the ON/OFF switch in the ON position?

2. Is the display blank?
   If YES is the electrical supply definitely turned on?
   Have you tried the plug in another socket (if available)?
3. Are there any Error Codes or Messages on the screen?
4. Is the oven preheating to the Correct Temperature (250°C), when the oven is turned on? The display will show the CATEGORIES screen when the correct temperature is reached.
   (Note: This can take up to 30 minutes.)
5. When you start to cook a product does the oven display Error Codes or Warning Messages?
   (Normally the display will show a timer counting down to zero)
6. When the cooking cycle is complete does the warning bell sound?



Display Panel messages:

Message	Condition	Possible cause
ERROR MAGNETRON 1	Magnetron 1 has overheated	Blocked Air filter(s) Oven located near hot air sources Oven being used empty Call Service Engineer
ERROR MAGNETRON 2	Magnetron 2 has overheated	
ERROR MAGNETRON 1 & 2	Magnetron 1 and 2 have overheated	
MAGNETRON 1 FAILED	Magnetron 1 has Failed	Component failure Call Service Engineer
MAGNETRON 2 FAILED	Magnetron 2 has Failed	
MAGNETRON 1 & 2 FAILED	Magnetron 1 & 2 has Failed	
CAVITY SENSOR ERROR	Cavity temperature exceeds more than 50°C above PREHEAT temperature setting during heat cycle	Indicates combustion (fire) in oven cavity

COOKING ISSUES:

If food products are not cooking correctly then please use the following questions to try to pinpoint the problem.
Merrychef service technicians can only change oven settings by the use of the correct Menukey.
Please note that not all questions may be applicable to the issue you are experiencing:

1. Was this problem present at the time you received your Merrychef oven?
2. Did the problem correspond with a new shipment of product(s)?
   (For example, perhaps the size of the product changed since the menu has been developed).
3. Is this an intermittent problem or always present?
4. Does the problem happen regardless of the type of food you are cooking?
   (as opposed to happening only when a specific type of food is cooked)?
6. Are you using the correct programme?
   (Review the Operations Guide if you are unsure).
7. Are all employees following correct cooking procedures?
8. Are there any alarm codes or warning messages on the screen?
9. Is the food item being cooked at the correct starting temperature?
10. Is the food item being removed from the oven immediately when the cooking is complete?

Standard Tests

Before carrying out diagnostics on the oven.

1. Check the Power Supply and confirm the Voltage is within +/- 10% of the nominal supply rating.

2. Check that the Oven is installed properly

3. The Filter is installed correctly postioned in the Filter Base (Incorrect fitting will cut the power to the oven

4. The oven is plugged in to the correct type of power supply.

5. Error messages in the display

Service diagnosis measurement is recommended as follows:
Please notice what is happening when the oven is switched on:
Using the Circuit Flow diagram on page 14 as a
Guide.

Check the input power supply at the Terminal Block is typically between 220-230 Volt (L1 and L2 versus neutral)
If Fuse 4 blows check that the Door operated Micro-switches at each side of the oven are adjusted correctly

The Low Voltage should be present at the logic board and the relay board which control the operation of the oven.
LED's will come on if Low Voltage is present on the Logic board and the Relay board.
The on/off switch also initiates the Microwave Stirrer Motors left and right to run.
The on/off switch initiates the Cooling Fan to run
The on/off switch initiates the Convection Hot Air Motor to run (Only if the Low Voltage is present)
The display lights up with informational text.

If some of the above does not occur use the Circuit Flow diagram for ease of fault finding. (page …)

If this all works the oven can be tested on the 3 Oven heating/cooking aspects.
1. Hot air motor,
2. The heating elements
3. Microwave

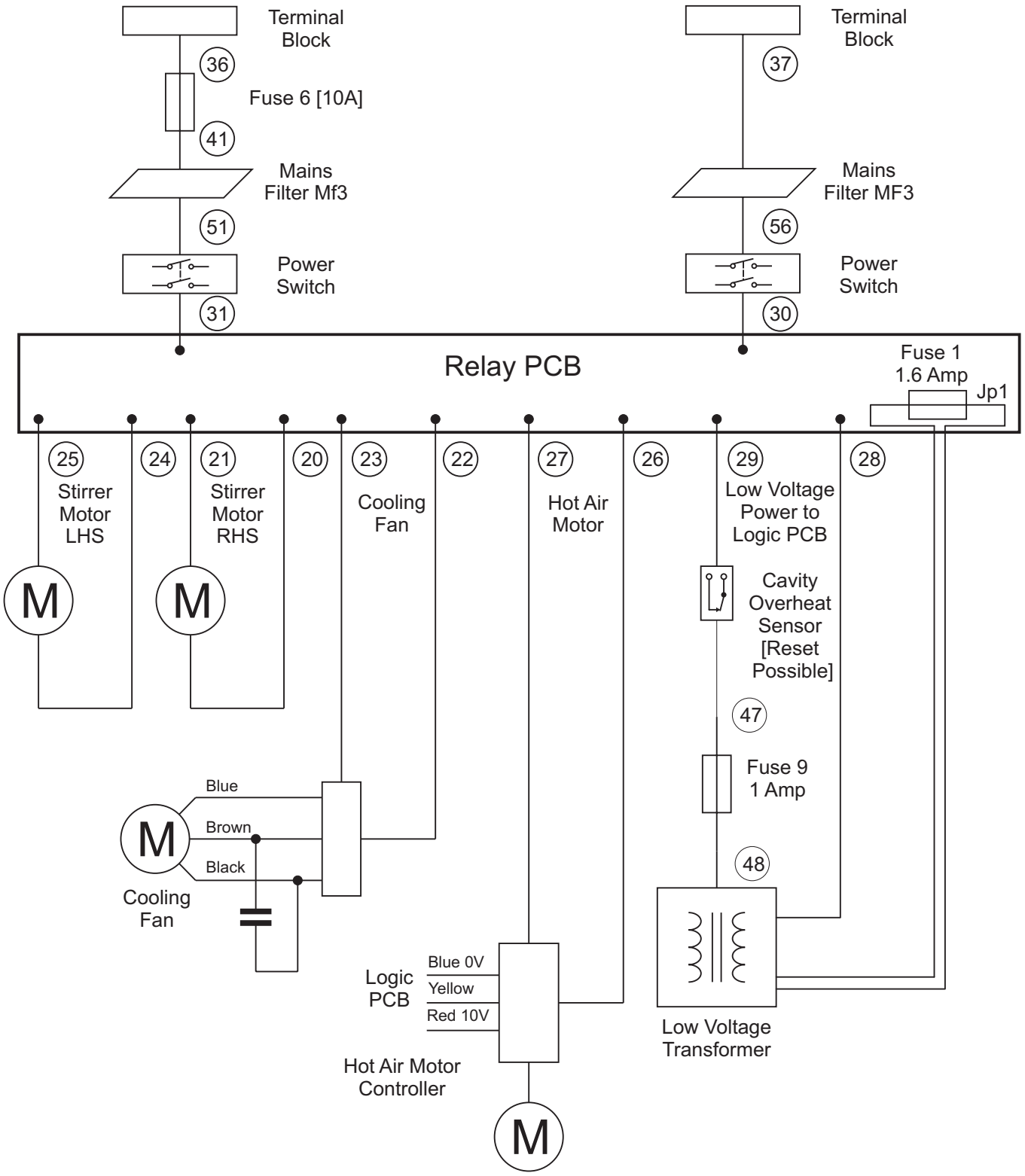
ensure the following:
During PREHEAT start up (from cold) the Heating elements current draw can be measured on wire 40 at Fuse 2 (20 Amp) typically 14.5 – 15.1 Amp
There are 5 elements of each 650 W, So a failing element can drop the current with approx. 2.8 Amp per element
Circuit Flow Diagram (Page 15) provides you with the current diagram and easy fault finding information.

The Hot Air Motor Controller can be checked by listening to the decrease in hot air motor speed if you open the door. The Hot air motor runs at 50% of the speed when the door is closed and on 20% if the door is opened. By measuring the DC voltage on connector JP 15 Logic Board wires Blue and Yellow you can double check. 20% is typically 1.9 – 2.1 VDC and 50% is typically 4.9 – 5.1 VDC

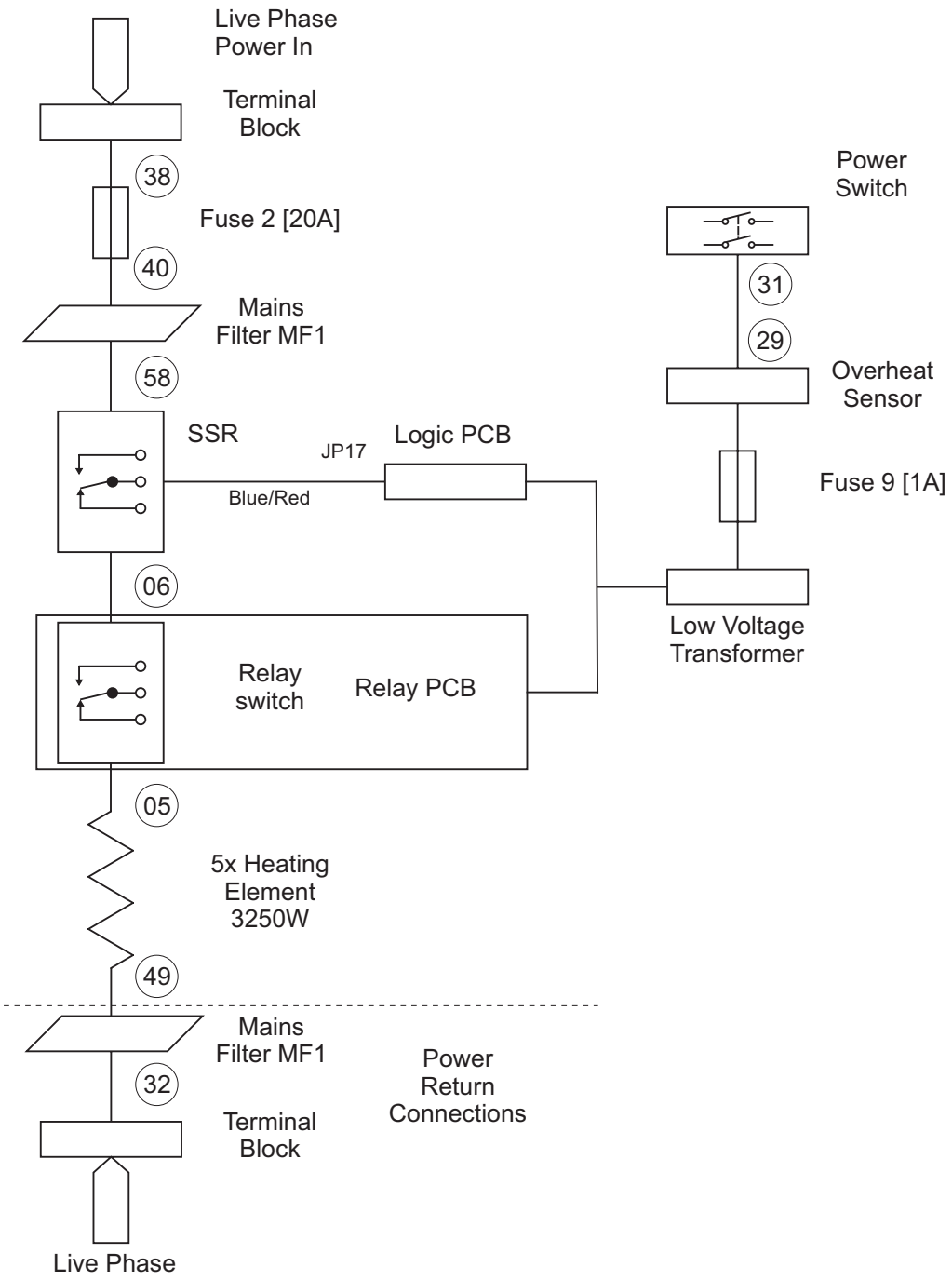
The Hot Air Motor Controller can be checked by listening to the decrease in hot air motor speed if you open the door. The Hot air motor runs at 50% of the speed when the door is closed and on 20% if the door is opened. By measuring the DC voltage on connector JP 15 Logic Board wires Blue and Yellow you can double check. 20% is typically 1.9 – 2.1 VDC and 50% is typically 4.9 – 5.1 VDC

To measure the Magnetron current draw you will need to set the oven to Manual Mode (set the pre-heat to zero) and operate the magnetrons (WARNING do not forget to put a load in the cavity, not with an empty oven) You may notice the LED's on the Logic PCB for the Magnetron detect from the Fibre optics, also notice the LED's D15 and D20 on the Relay Board while measuring the current on wire 44 at Fuse 8 and wire 46 at Fuse 7.
Typical current draw is between 5.6 – 6.5 Amps (Using Circuit Flow Diagram on page 16 will help to follow the circuit)
Do not forget to carry out a component measurement test in case you find errors in the magnetron environment. (WARNING Disconnect from the power supply and discharge the capacitor before touching any component)
Download the menu back from your MenuKey to the oven or set the PREHEAT temperature back to the original setting as it should be and save the settings.
Carry out an emission measurement test.

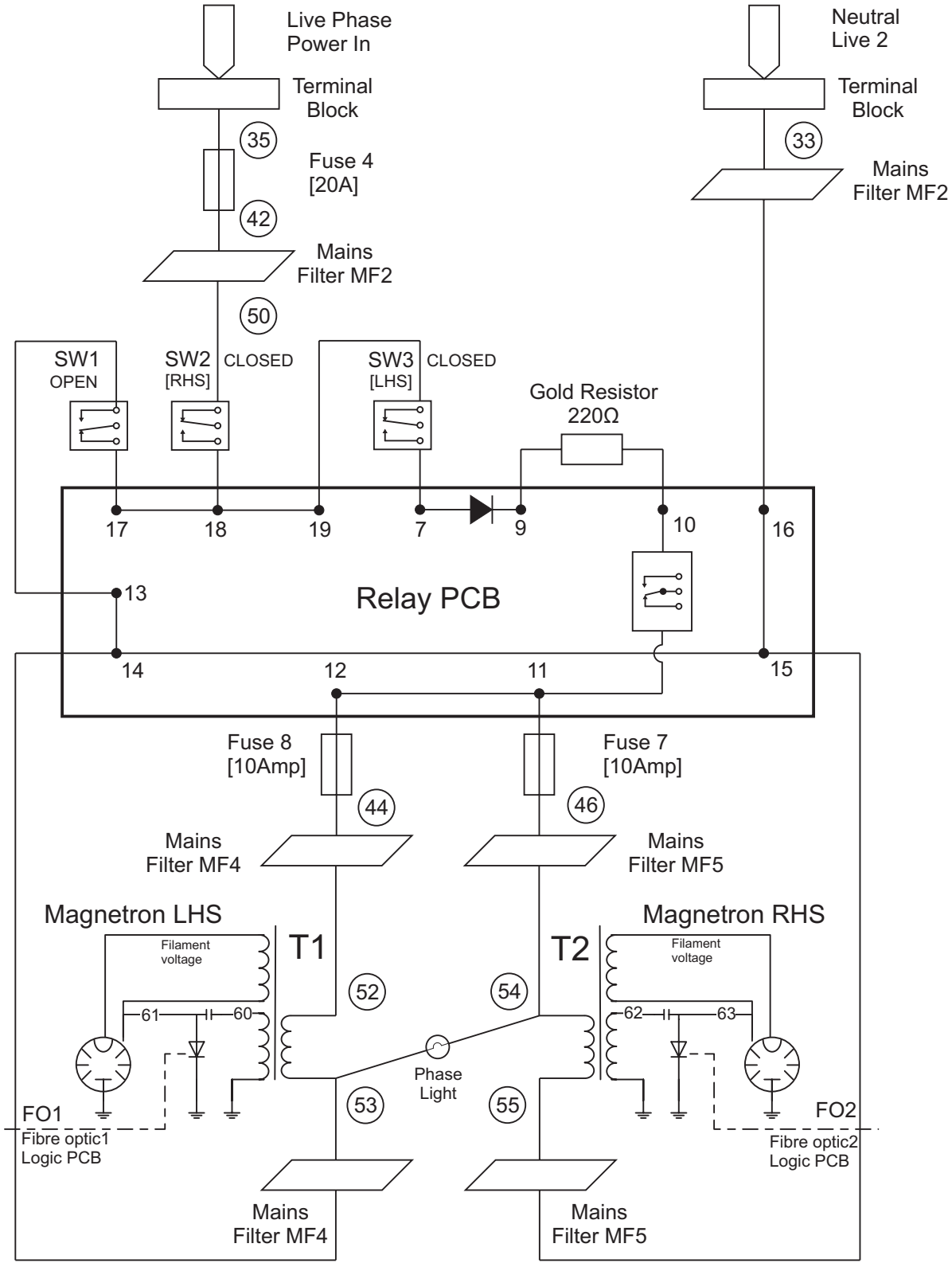
Circuit Flow Diagram: Motors, Fans and Low Voltage Circuit

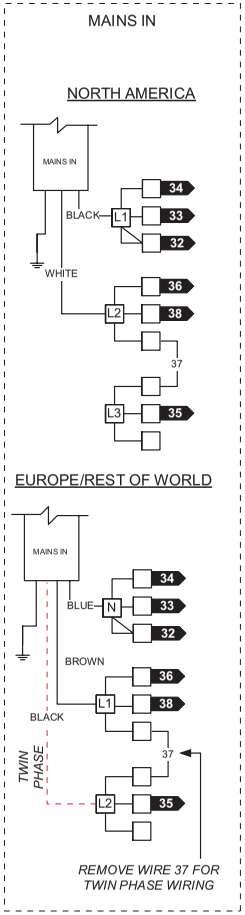


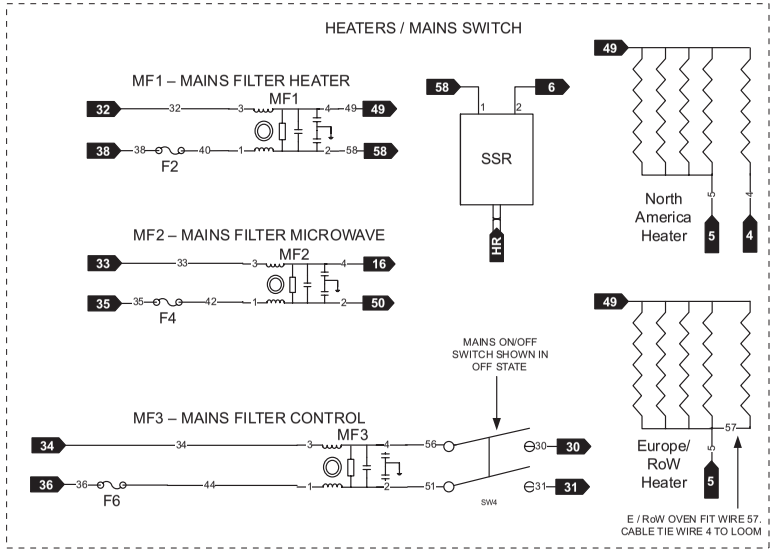
Circuit Flow Diagram: Cavity Heaters

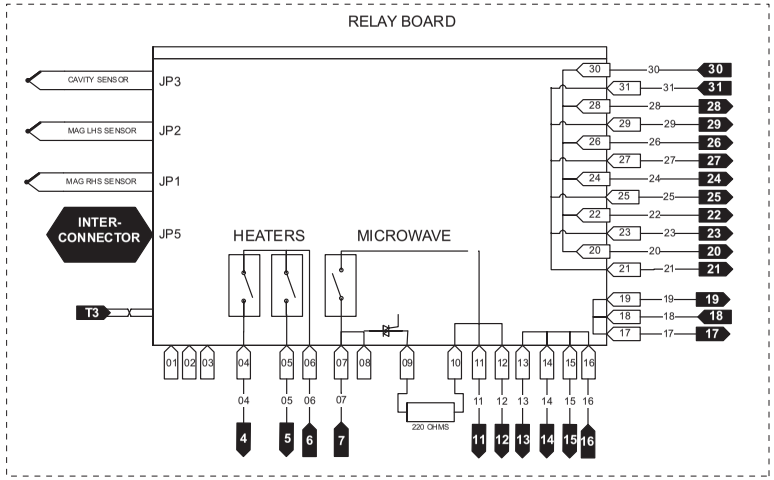


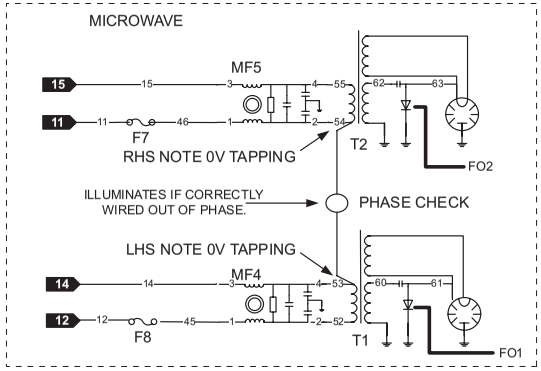
Circuit Flow Diagram: Magnetrons and HV Circuit

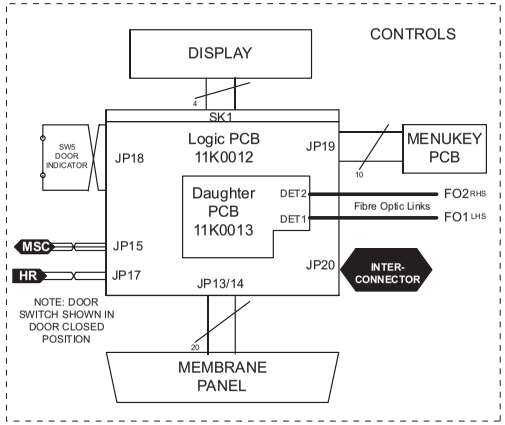


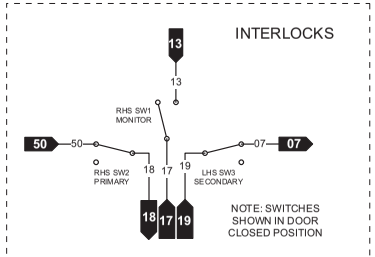


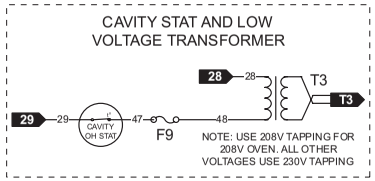


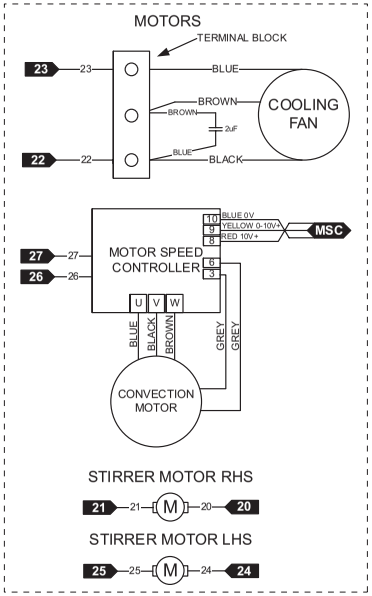









CAVITY STAT AND LOW VOLTAGE TRANSFORMER
T3
CAVITY OH STAT
F9
NOTE: USE 208V TAPPING FOR 208V OVEN. ALL OTHER VOLTAGES USE 230V TAPPING



NOTES

FUSE	VALUE	FUNCTION
F2	20A	HEATERS CIRCUIT
F4	20A	MICROWAVE / INTERLOCKS
F6	10A	CONTROL CIRCUIT
F7	10A	TRANSFORMER 2
F8	10A	TRANSFORMER 1
F9	1A	AUX TRANSFORMER 3

HEATER ELEMENTS
650 WATT PER ELEMENT

CAVITY OH STAT
300C / 572F

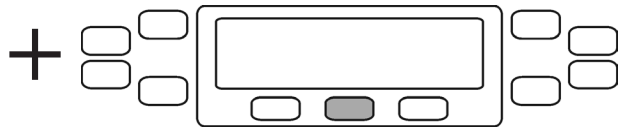
Issue 17

SWITCH OFF THE HEATERS (Disable PREHEAT)

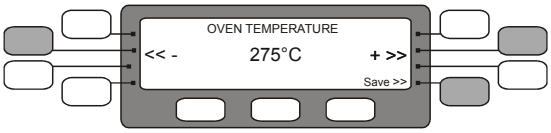
The oven has a constant operating temperature for cooking shown as the PREHEAT TEMPERATURE in the display when the oven is switched on.
When the cold oven is switched on it heats up to the PREHEAT temperature before cooking with programs can commence. This temperature is set initially at 275°C.

1. Switch oven **OFF**

Switch the oven **ON** and press and hold the **Edit Preheat Temp** function key to display OVEN TEMPERATURE.
(Note: this screen is available for 5 seconds)



The Display shows the Start up sequence and oven specification for 2-3 seconds
followed by the Edit PreHeat Temp screen.

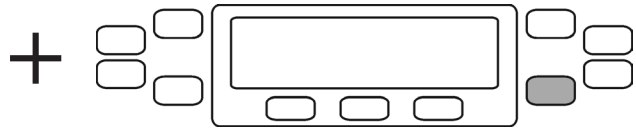


Set to 0C to switch heaters off and Save.

ENABLE MANUAL & PROGRAM MODE

1. Switch oven **OFF**

Switch the oven **ON** and press and hold the **Lower Right** (Edit Oven profile is hidden in the display) function key to display OVEN PROFILE.
(Note: this screen is available for 5 seconds)



PROGRAM MODE

OFF Programs are protected and cannot be edited.

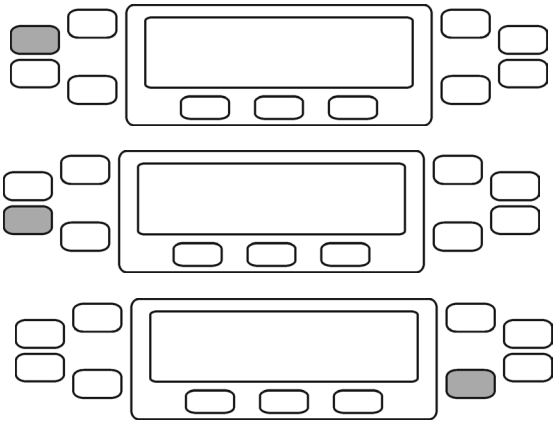
ON Allows Programs to be edited and added, MenuKey can be created

MANUAL MODE

OFF Manual controls are disabled. Only pre-set Programs can be used

ON Manual controls operate the oven directly from the control panel

Press **Save** to save the settings and exit



OPERATING INSTRUCTIONS: MANUAL MODE

The oven can be operated in manual or programmed mode. In order to use the manual controls MANUAL MODE should be set to **ON** in the oven profile.

WARNING:

DO NOT APPLY MICROWAVE ENERGY WHEN OVEN IS EMPTY

DO NOT USE THE OVEN WITHOUT

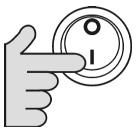
CLEAN AIR FILTERS IN POSITION

To familiarize yourself with the controls place a heatproof bowl containing approximately 1.5 litres of water in the oven.

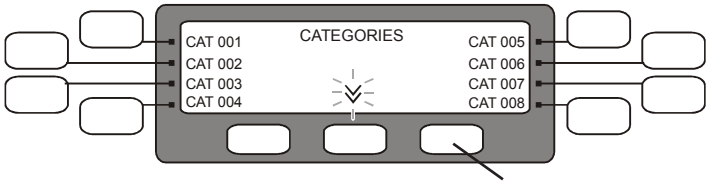
Using Manual Mode

1 Switch the oven **ON**

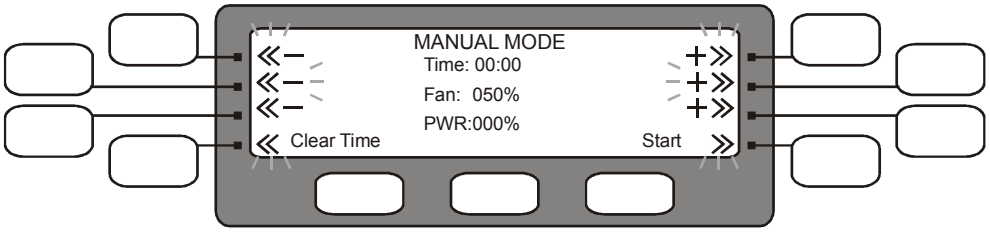
The oven heats up to its PREHEAT temperature this will take approximately 20 minutes.
The display will show the current oven cavity temperature.
When PREHEAT cooking temperature is reached the display will show the CATEGORIES screen.



2 To enter **MANUAL MODE** press the Lower Right Hand Function Pad under the display



Increase or decrease the fan speed (in 5% steps) use the -/+ pads



Press and hold the -/+ Pad will increase/decrease the time rapidly.

CodeKey: Firmware download

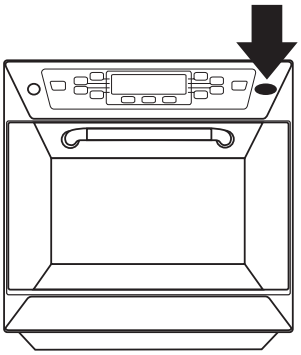
1 Ensure the power switch is **OFF**.

2 Lift the MenuKey cover in the top front panel of the oven and put the **Codekey** in the slot.

3 Warning:
During the next step the screen will go blank for approximately 1 minute during this time.
DO NOT REMOVE THE CODEKEY/DO NOT TURN THE OVEN OFF as this will permanently damage the Logic Board.

With the key still in place, switch the power switch **ON**.

After 1 minute the oven will boot up, press pause to hold the OVEN INFORMATION screen.
Confirm that the Firmware/Software version is correct.



OVEN INFORMATION

Oven on time:	00001 Hours
Magnetron on Time:	00000
Door Operations:	00000
Software Version:	4.4LD
MenuKey Code:	000
MenuKey Checksum:	4741

Firmware/Software Version

MenuKey : CHANGING OVEN MENU PROGRAMS

The MenuKey System automatically changes all the cooking programs on the oven from a pre-programmed electronic key.

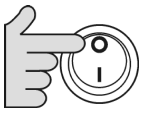
To change the menus on the oven:

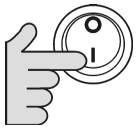
WARNING
Downloading from a MenuKey will clear all the existing programs

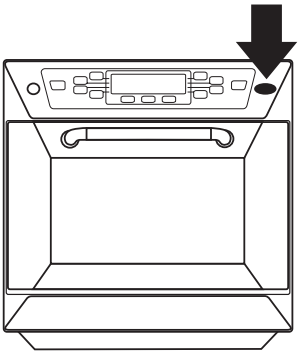
Do not remove the key during download sequence as this could corrupt the data on the key

MENUKEY2

Check that the key has the correct number/code for the programs you want to load into the oven memory







1 Ensure the power switch is **OFF**.

2 Lift the **MenuKey** cover in the top front panel of the oven and put the key in the slot.

3 With the key still in place switch the power switch **ON**. The oven will now go through the program download sequence by displaying the following:

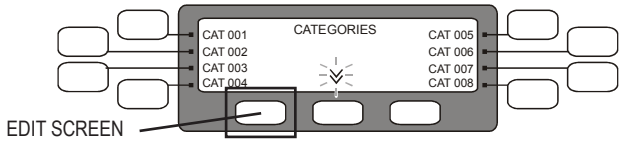
MenuKey Detected Please Wait	Copying Programs from MenuKey to Oven ■■■■□□□□□□	Verifying Programs Copied Correctly ■■■■□□□□□□	MenuKey Copied Successfully

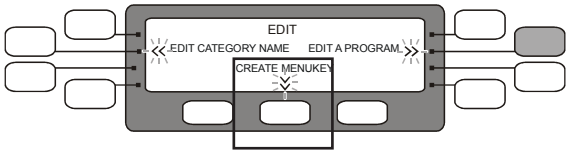
The display briefly will show the following : Oven Model No., Software & MenuKey serial No.
The Oven will then commence heating up to the PREHEAT temperature ready to cook.

4 Remove the MenuKey and keep in a safe place.

Saving Programs to a MenuKey

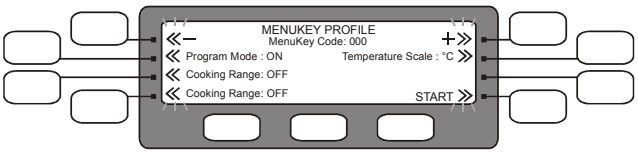
In the **CATEGORIES** screen select **EDIT SCREEN** (Pad name hidden) then select **CREATE MENUKEY**





1 Enter a number for the MenuKey Code to identify the new MenuKey, use the +/- Function Pads.

For an explanation of the following features see Setting the Oven Profile Page 11



2 Set the Program Mode to **ON** or **OFF**,
3 Set Manual Mode to **ON** or **OFF**:
4 Enter the Lower Band temperature setting **15-75°C**
5 Set the oven Temperature Scale **°C**

Insert a MenuKey and press START to copy the programs.
The display shows the following:

WARNING
Any programs already on the key will be deleted

Copying Programs from Oven to MenuKey ■■■■□□□□□□	Verifying Programs Copied Correctly ■■■■□□□□□□	MenuKey Copied Successfully

The Display returns to the CATEGORIES screen and the Oven will heat up to the PREHEAT temperature ready to cook.

PCB Connections & LED Indicators

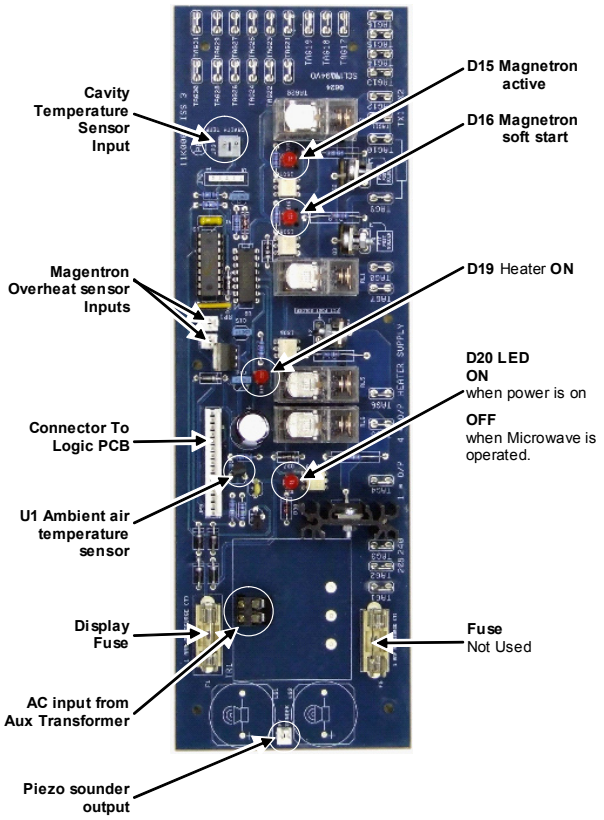
Relay PCB:

D15 Magnetron active

D16 Magnetron soft start

D19 Heating elements heating up

D20 ON when Low Voltage power is on, is OFF when microwave is operated.


Cavity Temperature Sensor Input
D15 Magnetron active
D16 Magnetron soft start
Magentron Overheat sensor Inputs
D19 Heater ON
D20 LED ON when power is on
OFF when Microwave is operated.
Connector To Logic PCB
U1 Ambient air temperature sensor
Display Fuse
Fuse Not Used
AC input from Aux Transformer
Piezo sounder output

Logic board:

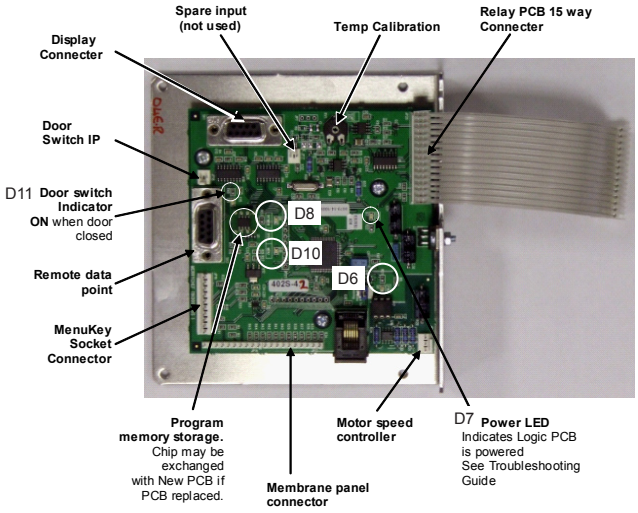
D6 Is in series with signal to the Motor Speed Controller output. Bright when fan speed is 100%, dimmed when Fan speed is 10% with the oven door open.

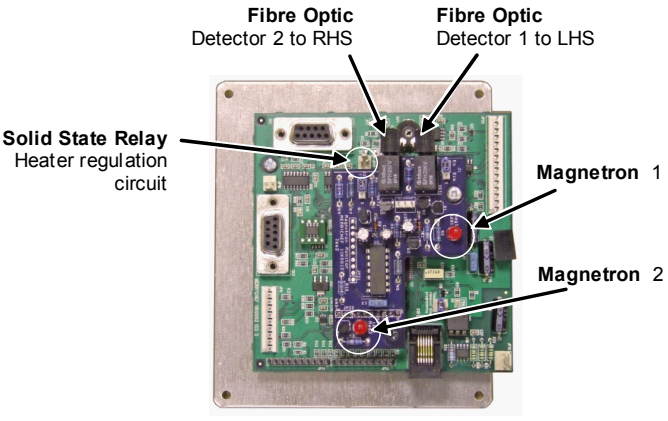
D7 Low voltage power on

D8 Flashes typically 1x per second to indicate that internal memory is being accessed.

D11 ON when door is closed, OFF when door is opened

D10 Illuminates when the main micro processor is accessing the MenuKey socket.


Spare input (not used)
Temp Calibration
Relay PCB 15 way Connecter
Display Connecter
Door Switch IP
D11 Door switch Indicator ON when door closed
Remote data point
MenuKey Socket Connector
D8
D10
D6
Program memory storage. Chip may be exchanged with New PCB if PCB replaced.
Membrane panel connector
Motor speed controller
D7 Power LED Indicates Logic PCB is powered See Troubleshooting Guide


Fibre Optic Detector 2 to RHS
Fibre Optic Detector 1 to LHS
Solid State Relay Heater regulation circuit
Magnetron 1
Magnetron 2